



 Research Article

## METHODOLOGY FOR ASSESSING THE FINANCIAL EFFICIENCY OF AGRO CLUSTERS

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### ABSTRACT

The issues of evaluating the effectiveness of cluster structures will not lose their relevance in the near future. In modern conditions, with limited financial resources, there are serious problems in choosing effective investment options. The proposed cluster assessment methodology to some extent solves this problem.

### KEYWORDS

Clusters, effectiveness, modern conditions, cluster assessment methodology, concept of the cluster, cluster competitiveness.

### INTRODUCTION

Increasing competition in the world market requires the creation of new forms of doing business that ensure the well-being of national producers and the development of the entire country. Today, the most effective solution to the problem of ensuring competitiveness is the concept of economic clustering. The concept of the cluster, which is implemented for the development of the economy of Uzbekistan, is gaining strength. However, the organization of a cluster does not guarantee its high efficiency. Therefore, the assessment of cluster competitiveness requires a methodology based on expert judgment.

In order to increase the effectiveness of measures taken by the state to support clusters, there is an increasing need to improve the methods of correctly evaluating their activity. The issue of evaluating the effectiveness of cluster structures will not lose its relevance in the near future. In modern conditions, along with limited financial resources, there are serious problems in choosing an effective investment option. The proposed methodology for cluster evaluation solves this problem to some extent.

Literature analysis. If we look at the research of foreign scientists, the main approaches to evaluating the

efficiency of clusters are presented in the works of I. Ferova, F. Shutilov, N. Klepikova, O. Nesmachnikh, E. Patrusheva [1-6].

Methods based on the cluster's private efficiency: the method of evaluating the synergistic effect and its types, the method of evaluating the effect of reducing transaction costs and infrastructure synergy, and the method of evaluating the effect of innovation diffusion. Methods of evaluating the economic efficiency of the cluster as investment projects: method of net present value indicator, method of real options. Indicator methods for evaluating cluster efficiency: the method of key indicators of cluster activity, the method of multi-indicator approach. Methods based on the assessment of the competitiveness of the cluster: assessment of various aspects of the competitiveness of the cluster, in which the position in the market, technological leadership, and ability to renew are evaluated, assessment of the factors of the current and strategic competitiveness of the cluster. Based on these methods, scientists have provided their respective analyses.

Analysis and results. In this study, we conducted analyses on the development of the methodology for evaluating the efficiency of cotton-textile clusters. The cotton textile industry of our country has certainly maintained a positive trend in recent years. According to the Ministry of Agriculture, with the introduction of the cluster method, the average yield increased by 4.9 centners compared to the lands outside the cluster. In

2020, the average yield of raw cotton was 2.89 t/ha, compared to 0.53 t/ha outside the cluster, In 2018 compared to the year, it is 0.77 t/h higher. But compared to the countries of the world, this yield is still very low, such as 3.1 t/ha in the USA, 4.4 t/ha in Egypt, 5.3 t/ha in Turkey, 5.6 t/ha in Brazil and 5.8 t/ha in China.

We believe that when assessing the effectiveness of cotton-textile clusters, it is necessary to pay attention to the following important features of their activity: quick return of investments; high mobility of production (the possibility of changing the product range); dominance of small and medium-sized businesses in the network; low organization of entrepreneurship; the high importance of geographic location for the success of a textile enterprise; weak innovative component in products; prospects of redirecting production to technical textiles; extensive use of industrial branding; provision of qualified personnel; rapid obsolescence of production facilities; high resource intensity of the used technologies; low rate of export of finished products; weak connections between enterprises and scientific institutions; lack of infrastructure elements to support industrial business (business incubators, technology parks, etc.); high dependence of textile workers on imported raw materials.

In our opinion, the assessment of cluster activity is based on a multi-indicator approach, which should be carried out in 11 main areas.

Table1

**Final form of cluster performance assessment**

Nº	Groups of indicators	Total score
1.	Estimating the composition of cluster members	
2.	The position of the cluster in the market	

3.	Production potential of the cluster	
4.	Evaluation of the cluster product	
5.	Evaluating the effectiveness of cluster management	
6.	Assessment of infrastructure provision of the cluster	
7.	Evaluation of the financial component	
8.	Evaluation of the innovative component of the cluster	
9.	Investment evaluation	
10.	Evaluation of personnel policy	
11.	Evaluation of efficiency from the perspective of the state	
<b>General (total) score:</b>		

In this case, taking the indicators that represent the specific characteristics of the cotton-textile cluster based on the following algorithm, gives an opportunity to comprehensively assess the cluster's activity.

1. The object of analysis is defined (that is, a cotton-textile cluster with a certain range of participants).
2. Determination of selection criteria and selection of experts based on it (respondents' experience in the studied field is taken into account, if necessary, rating coefficients are determined for different experts).
3. Preparation of form for expert evaluation and development of final form for analysis.
4. Completing the cluster efficiency assessment form by experts. In doing so, they are asked to consider a set of evaluation criteria for 11 areas and assign a weight to each of the indicators according to their importance in order to evaluate the efficiency of the cluster. For this purpose, the approximate indicator weight according to the three-point system is determined as follows: 3 - the indicator is very important for evaluation (has a high weight); 2 - the indicator is of average importance for evaluation (has an average weight); 1 - the indicator is of low importance for evaluation (has a low weight).

5. Evaluation of cluster efficiency by experts. In this case, the assessment is carried out in relation to the determined average values of the criteria on a five-point scale: 5 points (the highest score) - if it clearly exceeds the average values in the industry specified for the textile industry; 4 points - if it is slightly above the average values in the network; 3 points indicate the approximate equality of the network average and cluster indicator; 2 points means that there are a number of worse cluster indicators compared to the network average; 1 point - the cluster shows a significant lag in this indicator. At the same time, it should be noted that for some evaluation criteria, only a two-point evaluation system can be used, because it is difficult to evaluate the criteria perfectly, but their use in the methodology is important, which is important for the correct evaluation of the cluster activity.

6. Collecting questionnaires filled out by the researcher. The weight coefficients set by the experts should be transferred from the three-point system to the decimal point (parts of one) and the sum of the weights attached to each of the 11 criteria should be equal to 1.

7. Multiply the evaluations of each of the experts by the weight coefficients given in fractions of one and calculate the sum of points for each of the 11 criteria. Obtaining the final score of all experts (each completed questionnaire will have its own final score).

8. Calculation of the General (total) score of cluster efficiency:

8.1. The average is calculated according to the arithmetic formula as usual, if the rating coefficients are not assigned to the experts.

8.2. If the rating coefficients for experts are set, according to the weighted average arithmetic formula. It is necessary to calculate not only the total evaluation but also the total scores for 11 groups of indicators.

9. The results of the final form are used in the process of strategic and tactical planning of cluster activities.

10. To re-evaluate the effectiveness of the cotton-textile cluster at the end of the planning period to determine the level of achievement of the goals.

## CONCLUSIONS AND SUGGESTIONS

Our proposed methodology for evaluating cluster performance has its own characteristics, which are important for performance analysis. First, it reflects the indicators that take into account the characteristics of the studied network clusters, where the weights of the criteria are placed on the basis of similar judgments (based on the study of experts' opinions) and analyzed, a systematic classification is formed and conclusions are made easier. Secondly, the period of application of the methodology is limited, because the situation in the modern economy can change dramatically in one direction or another (for example, a ban on the import of foreign textile products as a result of the tightening of the sanctions policy), which

requires adjustments to the assessment procedure. Taking into account these concluding recommendations allows us to correctly assess the efficiency of local textile clusters.

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